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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,461	05/04/2001	Kuo-Jeng Wang	JCLA7069	8339

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J.C. Patents, Inc.
4 Venture, Suite 250
Irvine, CA 92618

02/12/2004

EXAMINER

ROSARIO-VASQUEZ, DENNIS

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 02/12/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,461

Applicant(s)

WANG, KUO-JENG

Examiner

Dennis Rosario-Vasquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification is unclear as to how "the difference between the brightness value and the darkness value of each pixel." (Spec: page 4, lines 2-3). Is the light turned on to obtain the brightness value of the pixel and then turned off to obtain the darkened value? Or is the difference obtained by subtracting the brightness value of the reference area from the value of each pixel? Or is the difference obtained by subtracting the values of neighboring pixels in a local area? The specification is totally inadequate with regard to this issue. A critical feature of the invention is left to speculation.

Claim Objections

3. The following quotations of 37 CFR § 1.75(a) is the basis of objection:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

4. Claim 1 is/are objected to under 37 CFR § 1.75(a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

Claim 1, line 5 has the phrase "the scanned region"; however the phrase lacks an antecedent basis. A suggestion is to change "the scanned region" to "a scanned region".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Konishi et al. (US Patent 5,530,239).

Regarding claim 1, which is representative of claim 2, Konishi et al. discloses a method for determining a local (The image sensor 5 uses lines of pixels @ col. 5, lines 30-38) compensation (Using figure 6 a stabilization time is used before the document is read using a read control circuit 12) for the pixel brightness (Grey scale values represent pixel brightness of an image: using figure 6, light from the lamp 3 is converted to a digital signal or grey scale value from A/D converter 6 (col. 4, lines 25-28 and col. 5, lines 30-32), applied to a plurality of pixels of a scanned document, the pixels having nonuniform brightness values and corresponding darkness values of the lamp generated after light of a lamp tube has been projected (Using figure 6, the output of the image sensor 5 varies when the lamp 3 has not stabilized in temperature (col. 4, lines

20-28).) onto a reference area (fig. 6, num. 2) and on the document (fig. 6, num. 1), the method comprising:

For each pixel of the scanned region, evaluating a difference ("A-B") between a brightness value ("A") and a darkness value ("B") therefor (col. 5, lines 41-45)(The values of "A or latest data" and "B or previous data" are subtracted from each other for each respective time period for a single pixel (col. 5, lines 36-45). As a result, a difference between pixel values implies that one pixel values is either lighter or darker than the previous pixel value.);

Comparing the difference between the brightness value and the darkness value of each pixel to a predetermined level value (A comparator compares the difference value "A-B" with a reference value (col. 5, lines 50,51); and

Applying a brightness compensation only to the pixels having a difference between the brightness value and darkness value less than the predetermined level value (Using figure 6,Konishi et al. states," When the output of the subtractor 9 (i.e., the difference of the outputs of the image sensor 5 during one cycle) is smaller than the reference value, the comparator 11 outputs a read signal...to the read control circuit 12. On receipt of the read signal, the read control circuit 12 supplies a driving signal to a motor (not shown), and couples the output of the A/D converter 6 to the image processing circuit 13. Thus, the read operation of the document is started at a time when the output of the image sensor 5 becomes stable, allowing image data to be output by the image processing circuit 13 (col. 5, lines 51-62)." Additionally Konishi et al. states," Accordingly, by starting the read operation of the document only when the

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change of the output of the image sensor corresponding to a specified pixel measured every predetermined time is smaller than the reference value, substantially the same level of output of the image sensor can be obtained from the beginning to the end of the read operation of the document. As a result, images with higher quality will be obtained (col. 4, lines 38-45). "

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi et al. (US Patent 5,530,239 A) and in view of Fender et al. (US Patent 4,639,586 A).

Regarding claims 3 and 4, Konishi et al. teaches a difference of pixel values as described above in claim 1, but does not teach using a ratio for a pixel difference as required for claims 3 and 4.

However, Fender et al. does teach the use of a difference of pixels using a ratio of intensities as shown in column 7 equation 3. " $I_{max} - I_{min}$ " is the difference between brightness value (I_{max}) and the darkness value (I_{min}), and the difference is used in the numerator, while in the denominator I_{max} and I_{min} are used.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to use Fender et al's equation as a modification of Konishi et al's

difference equation because dividing by a sum normalizes the intensity values and the formula "works well for single or multiple wavelength sources and, when solved, yields the optical path difference in waves (Fender et al. @ col. 7, lines 42-47)."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Litt et al. (US Patent 5,091,963) is pertinent as teaching a method of using differences in intensity with a predetermined threshold to provide a correction (col.3, lines 4,5).

Kato (US Patent 5,214,518 A) is pertinent as teaching a method of correcting brightness using a range of brightness values (Fig. 7 shows a range of brightness values being corrected).

Ishiba et al. (US Patent 5,500,745 A) is pertinent as teaching a method of comparing values (A and B) with a threshold and correcting the data from the threshold operation afterwards (fig. 2).

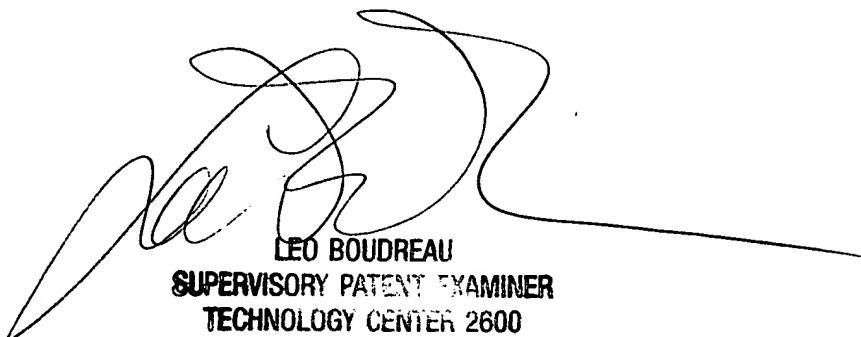
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario-Vasquez whose telephone number is 703-305-5431. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DRV

Dennis Rosario-Vasquez
Unit 2621



LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600